

Attach to Applicants

DBGET Search Result

Database: LIGAND

Ligand Chemical Database, Combination of COMPOUND, GLYCAN, REACTION and ENZYME
Release 27.0/09-23, Sep 03
Institute for Chemical Research, Kyoto University
3,160 entries for COMPOUND, Chemical Compound Database
10,737 entries for GLYCAN, Carbohydrate Structure Database
10,454 entries for GLYCAN, Carbohydrate Structure Database
5,813 entries for REACTION, Chemical Reaction Database
4,223 entries for ENZYME, Enzyme Nomenclature Database

Keyword(s): biotin ligase (Total 16 hits. / limit=1000)

1. EC:6.2.1.11 biotin-CoA ligase; biotinyl-CoA synthetase; biotin CoA synthetase; biotinyl coenzyme A synthetase
2. EC:6.3.4.9 biotin-[methylmalonyl-CoA-carboxyltransferase] ligase; biotin-[methylmalonyl-CoA-carboxyltransferase] synthetase; biotin-transcarboxylase synthetase; biotin-transcarboxylase synthetase;
3. EC:6.3.4.10 biotin-[propionyl-CoA-carboxylase] ligase; biotin-[propionyl-CoA-carboxylase] synthetase; biotin-propionyl coenzyme A carboxylase synthetase; propionyl coenzyme A holocarboxylase
4. EC:6.3.4.11 biotin-[methylcrotonoyl-CoA-carboxylase] ligase; biotin-[methylcrotonoyl-CoA-carboxylase] synthetase; biotin-beta-methylcrotonyl coenzyme A carboxylase synthetase; beta-methylcrotonyl syn
5. EC:6.3.4.12 biotin-[methylcrotonoyl-CoA-carboxylase] ligase; biotin-[methylcrotonoyl-CoA-carboxylase] synthetase; biotin-[acetyl coenzyme A carboxylase] synthetase; acetyl CoA holocarboxylase synthe
6. EC:6.3.4.13 biotin-[methylcrotonoyl-CoA-carboxylase] ligase; biotin-[methylcrotonoyl-CoA-carboxylase] synthetase; biotin-[acetyl coenzyme A carboxylase] synthetase; acetyl CoA holocarboxylase synthe
7. EN:R01074 biotin-CoA ligase (AMP-forming); Biotin:acetyl-CoA:carbon-dioxide ligase (AMP-forming); Biotin:acetyl-CoA:carbon-dioxide ligase (AMP-forming); Biotin:acetyl-CoA:carbon-dioxide ligase (AMP-forming)
8. EN:R01075 7,8-Diaminonanoate:carbon-dioxide cyclo-ligase; ATP + 7,8-Diaminonanoate + CO2 <=> ADP + Orthophosphate + Biotinyl-CoA
9. EN:R03102 biotinyl-5'-AMP:CoA ligase (AMP-forming); Biotinyl-5'-AMP + CoA <=> ADP + Biotinyl-CoA
10. EN:R03103 biotin-carboxyl-carrier-protein:carbon-dioxide ligase (AMP-forming); ATP + Holo-[carboxylase] + HCO3- <=> ADP + Orthophosphate + Carboxybiotin-carboxyl-carrier protein
11. EN:R03104 biotin-[acetyl-CoA:carbon-dioxide ligase (AMP-forming); Acetyl-CoA + Biotin + Holo-[carboxylase] <=> Malonyl-CoA + Holo-[carboxylase]
12. EN:R04562 biotin:apo-[acetyl-CoA:carbon-dioxide ligase (AMP-forming); Acetyl-CoA + Biotin + Apo-[methylmalonyl-CoA-pyruvate carboxyltransferase] <=> AMP + Pyrophosphate + [Methylmalonyl-CoA:pyruvate carboxyltransferase]
13. EN:R04563 biotin:apo-[methylmalonyl-CoA:pyruvate carboxyltransferase] ligase (AMP-forming); ATP + Biotin + Apo-[methylmalonyl-CoA:pyruvate carboxyltransferase] <=> AMP + Pyrophosphate + [Methylmalonyl-CoA:pyruvate carboxyltransferase]
14. EN:R04564 biotin:apo-[propionyl-CoA:carbon-dioxide ligase (AMP-forming)]; ATP + Biotin + Apo-[propionyl-CoA:carbon-dioxide ligase (AMP-forming)] <=> AMP + Pyrophosphate + [Propionyl-CoA:carbon-dioxide ligase (AMP-forming)]
15. EN:R04565 biotin:apo-[3-methylcrotonoyl-CoA:carbon-dioxide ligase (AMP-forming)]; ATP + Biotin + Apo-[3-methylcrotonoyl-CoA:carbon-dioxide ligase (AMP-forming)] <=> AMP + Pyrophosphate + [3-Methylcrotonoyl-CoA:carbon-dioxide ligase (AMP-forming)]
16. EN:R05145 biotinyl-5'-AMP:apo-[carboxylase] ligase (AMP-forming); Biotinyl-5'-AMP + Apo-[carboxylase] <=> AMP + Holo-[carboxylase]

DBGET integrated database retrieval system, GenomeNet

[LinkDB]

ENTRY EC 6.3.4.15
NAME biotin-[acetyl-CoA-carboxylase] ligase
biotin-[acetyl-CoA carboxylase] synthetase
biotin-[acetyl coenzyme A carboxylase] synthetase
acetyl coenzyme A holocarboxylase synthetase
acetyl CoA holocarboxylase synthetase
biotin:apocarboxylase ligase
Biotin holoenzyme synthetase
HCS

CLASS Ligases
Forming carbon-nitrogen bonds
Other carbon--nitrogen ligases

SYSNAME biotin:apo-[acetyl-CoA:carbon-dioxide ligase (ADP-forming)] ligase
\$(AMP-forming)

REACTION ATP + biotin +
apo-[acetyl-CoA:carbon-dioxide ligase (ADP-forming)] = AMP +
diphosphate + [acetyl-CoA:carbon-dioxide ligase (ADP-forming)]

SUBSTRATE ATP
biotin
apo-[acetyl-CoA:carbon-dioxide ligase (ADP-forming)]

PRODUCT AMP
diphosphate
[acetyl-CoA:carbon-dioxide ligase (ADP-forming)]

REFERENCE 1 [UI:75224638]
Landman, A.D. and Dakshinamurti, K. Acetyl-Coenzyme A carboxylase.
Role of the prosthetic group in enzyme polymerization. Biochem. J.
145 (1975) 545-548.

PATHWAY PATH: MAP00780 Biotin metabolism

ORTHOLOG KO: K01947 biotin-[acetyl-CoA-carboxylase] ligase

GENES HSA: 3141(HLCS)
MMU: 110948(HLCS)
SCE: YDL141W(BPL1)
SPO: SPBC30D10.07c
ECO: b3973(birA)
ECJ: JW3941(birA)
ECE: Z5544(birA)
ECS: ECs4900
ECC: c4932(birA)
STY: STY3741(birA)
STM: STM4138(birA)
YPE: YPO3759(birA)
YPK: y0472(birA)
SFL: SF4051(birA)
SFX: S3689(birA)
WBR: Wbr0240(birA)
BFL: Bfl1184(birA)
HIN: HI0220.1(birA)
PMU: PM0296(birA)
XFA: XF1796
XFT: PD1071(birA)
XCC: XCC3938(birA)
XAC: XAC4018(birA)
VCH: VC0319
VVU: VV11198 VV11199
VPA: VP2931
PAE: PA4280(birA)
PPU: PP0437(birA)
PST: PSPT00610(birA)
SON: SO0214(birA)
CBU: CBU1002(birA)
NME: NMB2075
NMA: NMA0357(birA)
CVI: CV0486(birA)

RSO: RS03279(birA)
NEU: NE2459(birA) NE2460(birA)
HPY: HP1140(birA)
HPJ: jhp1068
HHE: HH0421(birA)
WSU: WS0508(birA)
CJE: Cj0099(birA)
RPR: RP533(birA)
RCO: RC0773(birA)
MLO: mll1351
SME: SMc01928(birA)
ATU: Atu1284(birA)
ATC: AGR C 2366(birA)
BME: BMEI1144
BMS: BR0816
BJA: bll4903(birA)
CCR: CC1936
BSU: BG11206(birA)
BHA: BH1685(birA)
BAN: BA1560(birA)
BCE: BC1537
OIH: OB1764(birA)
SAU: SA1289
SAV: SAV1456
SAM: MW1346
SEP: SE1144
LMO: lmo1904(birA)
LIN: lin2018(birA)
LLA: L0191(birA1) L0192(birA2)
SPY: SPy1362(birA)
SPM: spyM18 1374(birA)
SPG: SpyM3 1036(birA)
SPS: SPs0824
SPN: SP1900
SPR: spr1715(birA)
SAG: SAG0830
SAN: gbs0848
SMU: SMU.1578(birA)
LPL: lp 0337(birA1) lp 0854(birA2)
EFA: EF3240(birA)
CAC: CAC0212 CAC0589(birA)
CPE: CPE0673(birA)
CTC: CTC00852(birA)
TTE: TTE1965(birA)
MTU: Rv3279c(birA)
MTC: MT3379
MBO: Mb3307c(birA)
MLE: ML0732(birA)
CGL: NCg10679(Cg10709)
CEF: CE0740
SCO: SCO4927(SCK13.19)
BLO: BL1533
TWH: TW024(birA)
TWS: TW026
FNU: FN1921
RBA: RB5918(birA)
CTR: CT725(birA)
CMU: TC0098
CPN: CPn0866
CPA: CP1003
CPJ: birA
CPT: CpB0894(birA)
CCA: CCA00901
TPA: TP0357
LIL: LA0832(birA)
BTH: BT2238
SYN: sll1655(birA)

SYW: SYNW1876(BirA)
ANA: alr5256
PMM: PMM0433(BirA)
PMT: PMT1359(birA)
CTE: CT0053(birA)
DRA: DR2341
AAE: aq_566(birA)
TMA: TM0224
MJA: MJ1619(birA)
MAC: MA0676(bpl)
MMA: MM1829
MTH: MTH1916
AFU: AF0074(birA)
PHO: PH0147
PAB: PAB0096(birA) PAB0104(birA-like)
PFU: PF0077 PF1676
SSO: SSO0662(bioR)
STO: ST1525
DISEASE MIM: 253270 Holocarboxylase synthetase
STRUCTURES PDB: 1BIA 1BIB 1HxD
DBLINKS IUBMB Enzyme Nomenclature: 6.3.4.15
ExpASY - ENZYME nomenclature database: 6.3.4.15
WIT (What Is There) Metabolic Reconstruction: 6.3.4.15
BRENDA, the Enzyme Database: 6.3.4.15
CAS: 37340-95-7

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[[KEGG](#) | [DBGET](#) | [GenomeNet](#)]

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(FILE 'HOME' ENTERED AT 17:50:02 ON 23 SEP 2003)

FILE 'CAPLUS' ENTERED AT 17:50:07 ON 23 SEP 2003

L1	39 S MATB
L2	63 S MALONYL? (2W) (SYNTHETASE OR SYNTHASE)
L3	94 S L1 OR L2
L4	3 S L2 AND COELICOLOR

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